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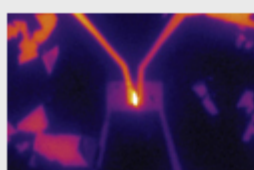
PHOTONICS MEDIA

THE PULSE OF THE INDUSTRY



Thursday, March 20, 2014

## Small 2-D Material Has Big Potential



A new 2-D material has big possibilities for the field of optoelectronics. According to MIT researchers, the material, tungsten diselenide, could potentially manipulate light and electricity interactions. It has already demonstrated improved efficiency and spectral properties in a variety of applications, including lighting, displays, optical interconnects, logics and sensors.

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## Nanosensors on CDs Simplify Bio Sample Study

A team from Spain has developed a technique using aluminum optical nanosensors to study biological samples with a CD and a CD player.

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## High-Tech Glasses Show Cancer Cells

New eyewear technology has been developed that allows doctors to see cancer cells inside a patient during surgical procedures.

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## Products on PhotonicsBuyersGuide.com



### Necsel Red Laser

**Necsel**  
Necsel offers the Necsel Red Laser at 637nm in 8W and 16 W power options. Free-space or fiber-coupled configurations are available in a package of only a few cubic inches.

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### Machine Vision Lenses

**FOCtek Photonics**  
FOCtek provides customers with optical lens assemblies and custom-made lenses. Products are used in precision instruments, medical equipment, automation equipment and security.

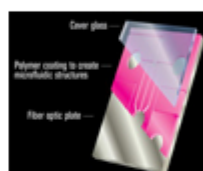
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### Diode Laser Lens Assemblies

**Universe Kogaku America**  
Universe Kogaku designs and manufactures lenses for diode laser collimators, laser pointers, laser levels, laser surface inspection systems and positioning and measuring equipment.

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### Glass and Polymer Fused Fiber Optics

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Making critical contributions to the scientific, medical, life-sciences and defense markets, INCOM is the world's largest supplier of glass polymer fused fiber optics and microstructures.

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## Cambridge Student Wins Outstanding Student Paper Prize

Johannes von Lindeiner has been awarded the 2014 Corning Outstanding Student Paper Competition top prize by the OSA Foundation and Corning Inc.

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## Diffraction Catheter Enhances OCT Imaging

A new imaging catheter that enables real-time, ultrahigh-resolution OCT imaging to form a 3-D volumetric dataset could potentially improve image contrast.

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## Tech Breakthrough with Mini Optical Switch

Photons may someday replace electrons inside cellphones, automobiles and other products, thanks to the development of an ultrafast, ultrasmall optical switch.

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In this edition of the industry's **premier weekly newscast**: High-tech glasses identify cancer cells, photon detection is made easier, a diffraction catheter enhances OCT imaging, the Hubble Telescope celebrates its 24th year, and we talk with Physicist and Figulus President Jean-Michel Pelaprat.

## Nano-injection Makes Photon Detection More Efficient

Northwestern University researchers have developed a new approach to photon number resolving, which operates high-performance imaging systems at short-wave IR (SWIR) wavelengths.

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## Funding Furthers OnTarget Imaging Research

Further development of optical imaging technology for cancer research is now possible, thanks to \$15 million in funding recently awarded to OnTarget Labs.

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## Hyperspectral Imager Boosts Biomed Research

A new hyperspectral imaging system, developed by Bodkin Design and Engineering, offers identification and analysis of complex microscopic samples in real time.

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## WHITE PAPER



### Characterization to the Extremes: Terahertz materials characterization at cryogenic temperatures and high magnetic fields

Lake Shore Cryotronics, Inc.

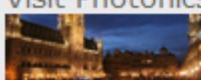
In continuing pursuit of improved performance, higher processing speed, and more compact packaging, researchers spend considerable time identifying and characterizing novel and previously unexplored materials. Recently, the terahertz frequency range has emerged as a new frontier for materials science, helping to map out this unknown territory. This paper explores how THz energy can be used to gain insights into material properties, particularly under variable or extreme temperatures and magnetic fields.

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## Industry Events

### SPIE Photonics Europe - April 14-17, 2014 · Brussels, Belgium

Visit Photonics Media at Booth 217 S



SPIE Photonics Europe brings together different disciplines, technologies and perspectives from across Europe and around the world. Participants will learn about new research and the latest funding opportunities, and will have the opportunity to attend a number of conferences.

Session topics to be featured include metamaterials, nanophotonics, photonic crystal materials and devices, micro-structured and specialty optical fibers, silicon photonics and photonic integrated circuits, and photonics for solar energy systems.

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## FEATURED VIDEO



### V-Gen – Award Winning Ytterbium Fiber Laser

V-Gen CEO, Eran Inbar, talks about their Prism Award winning fiber laser. The VPFL-ISP-1-40-HE-50000, the Ytterbium fiber laser with the shortest pulsewidth, highest peak power, and highest pulse energy. This fiber laser drills, cuts, scribes, and contours diverse materials (silicon, metals, and plastics), supporting key fields such as touch panel display, PCB manufacturing, and solar-cell, electronic, and automotive industries.

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